

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 81-45

NPDES NO. CA0037800

REVISED WASTE DISCHARGE REQUIREMENTS FOR

SONOMA VALLEY COUNTY SANITATION DISTRICT
SONOMA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter the Board) finds that:

1. Sonoma Valley County Sanitation District (hereinafter referred to as discharger) has requested revised waste discharge requirements under the National Pollutant Discharge Elimination System. The discharger has completed a revised facilities plan, dated January 1981, which recommends a dry weather agricultural water reclamation project, with a discharge of up to 10.5 million gallons per day (MGD) of secondary municipal effluent to Schell Slough during the wet weather season.
2. The Board, on January 17, 1978 adopted Order No. 78-1 prescribing waste discharge requirements for the discharger's treatment plant located near Schellville, Sonoma County. These requirements contain discharge prohibitions and prescribe interim effluent limitations for the limited secondary treatment plant.
3. The Board, on January 17, 1978 adopted Order No. 78-5, an Enforcement Order for Issuance of a Time Schedule, for construction of total reclamation facilities including a treatment plant designed for 3.0 million gallons per day (MGD) with wet weather equalization basins to handle flows of up to 10.5 MGD, collection system improvements, and an effluent storage and distribution system. Treatment plant and collection system improvements are presently completed. The treatment plant currently produces a secondary, nitrified effluent.
4. The Board on April 17, 1979 adopted Order No. 79-36 amending Order No. 78-1 to prescribe revised interim effluent limitations consistent with the interim plant's capability. As the treatment plant improvements are now completed, interim effluent standards are no longer necessary.
5. The discharger, in early 1979, requested reconsideration of the year around discharge prohibition contained in the NPDES Permit (Order No. 78-1) because of a lack of firm demand for all of the wastewater to be generated and stored in a proposed reservoir. Further, financial constraints would not allow for the construction of this costly total reclamation system, especially in light of fluctuating demands for the reclaimed water. The discharger has since studied alternative methods of compliance with the Water Quality Control Plan (Basin Plan) with the assistance of Clean Water Grant funds.

6. The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses:
 - a. At any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, and
 - b. Into any nontidal water or dead-end slough or similar confined water areas or their immediate tributaries. Exceptions can be considered where a discharge is approved as part of a reclamation project.
7. The beneficial uses of Schell Slough and its tributaries are:
 - a. Recreation
 - b. Esthetic enjoyment
 - c. Habitat for fish, waterfowl and other aquatic wildlife
8. The discharger has prepared a final Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (Public Resources Code Section 2100 et. seq.). The final Environmental Impact Report was adopted by Sonoma County Board of Directors on May 19, 1981, Resolution No. 69419 and the project report to approve the construction of the wastewater reclamation and disposal facilities was adopted on May 19, 1981, Resolution No. 69420.
9. The EIR specifies that this project could have the following adverse impacts on the environment:
 - a. Construction may possibly disrupt areas having archeological significance;
 - b. Construction may possibly temporarily disrupt wildlife habitat and vegetation;
 - c. Mosquito and midge control are potential problems;
 - d. Pump stations and pipelines at stream crossings may be subject to damage at flood waters;
 - e. Contamination of ground water by wastewater percolation at irrigation sites;
 - f. Contamination of surface water by wastewater runoff from irrigation sites;
 - g. Public contact with wastewater at storage or application site, and;
 - h. Public exposure to pathogens in wastewater through inhalation of aerosols resulting from spray irrigation.

10. If cultural material is revealed, construction in the area will be stopped until the integrity of the find is insured to mitigate adverse impacts of Finding 9.a.
11. The discharger will design and manage the treatment and irrigation facilities to mitigate adverse impacts of Finding 9.b, 9.c, 9.d, 9.e, 9.f, 9.g and 9.h.
12. The discharge is presently governed by Regional Board Order Nos. 78-1, 78-5 and 79-36, adopted on January 17, 1978, January 17, 1978 and April 17, 1979 respectively.
13. The discharger and interested agencies and persons have been notified of the Board's intent to prescribe requirements for the discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
14. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. The discharger is prohibited from bypassing or overflowing untreated wastewater to waters of the United States, either at the plant or from the collection systems.
2. The average dry weather flow to the treatment plant shall not exceed 3.0 mgd. Average shall be determined over three consecutive dry weather months each year.
3. The discharge of wastewater to Schell Slough is prohibited from May 1 through November 30 of each year. The Executive Officer may authorize discharge prior to November 30 based on a demonstration that early rainfall has produced adequate flushing flow in Schell Slough.

B. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>30-day Average</u>	<u>7-day Average</u>	<u>Daily Maximum</u>
a. BOD	mg/l	30	45	60
	lbs/day	751		1502
	kg/day	340		681
b. Suspended Solids	mg/l	30	45	60
	lbs/day	751		1502
	kg/day	340	0	681
c. Oil & Grease	mg/l	10	--	20
	lbs/day	250		500
	kg/day	113		227
d. Settleable Solids	ml/l-hr	0.1	--	0.2
e. Chlorine residual	mg/l	--	--	0.0

- f. In any representative set of samples the wastes as discharged shall meet the following limit of quality:

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The survival of a test organism acceptable to this Regional Board in 96-hour bioassays of the effluent as discharged shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

- g. The discharge shall not have pH of less than 6.0 nor greater than 9.0.

2. The waste as discharged, or at some place in the treatment process, shall meet the following limit of bacteriological quality:

The total coliform bacteria for a median of five consecutive effluent samples shall not exceed a most probable number (MPN) of 23 per 100 milliliters.

3. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated: (1)

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l (kg/day)	0.01 (0.113)	0.02 (0.227)
Cadmium	mg/l (kg/day)	0.02 (0.227)	0.03 (0.034)
Total Chromium	mg/l (kg/day)	0.005 (0.019)	0.01 (0.113)
Copper	mg/l (kg/day)	0.2 (2.27)	0.3 (3.4)
Lead	mg/l (kg/day)	0.1 (1.13)	0.2 (2.27)
Mercury	mg/l (kg/day)	0.001 (0.011)	0.002 (0.023)

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Nickel	mg/l (kg/day)	0.1 (1.13)	0.2 (2.27)
Silver	mg/l (kg/day)	0.02 (0.227)	0.04 (0.45)
Zinc	mg/l (kg/day)	0.3 (3.40)	0.5 (5.67)
Cyanide	mg/l (kg/day)	0.1 (1.13)	0.2 (2.27)
Phenolic Compounds	mg/l (kg/day)	0.5 (5.67)	1.0 (11.35)
Total Identifiable			
Chlorinated			
Hydrocarbons	mg/l (kg/day) (2)	0.002 (0.073)	0.004 (0.146)

(1) These limits are intended to be achieved through secondary treatment source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

4. The arithmetic mean of the biochemical oxygen demand and suspended solids values, by weight, for effluent samples of wastewater discharged to Schell Slough that are collected in a period of 30 consecutive calendar days, shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved oxygen 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above,, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum.
 - c. pH Variation from natural ambient pH by more than 0.2 pH units.
 - d. Un-ionized Ammonia 0.025 mg/l annual median
as N 0.4 mg/l maximum
 - e. Nutrients Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving water adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Pond Limitations

1. Wastewater within one foot of the surface of wastewater storage ponds shall meet the following limits at all times:
 - a. Dissolved Oxygen 2.0 mg/l minimum
 - b. Dissolved Sulfide 0.1 mg/l maximum
2. A minimum freeboard of at least 2 feet shall be maintained in the ponds.
3. The ponds shall be protected against erosion, washout and flooding from a flood having a predicted frequency of once in 100 years.

E. Provisions

1. The discharger shall comply with the following time schedule to achieve compliance with Prohibition A.3:

- | <u>Task</u> | <u>Completion Date</u> |
|--|------------------------|
| a. Submit cost-effective analysis describing the project to SWRCB by | August 1, 1981 |
| b. Begin Design | September 1, 1981 |
| c. Complete Design | January 1, 1982 |
| d. Begin Construction | April 1, 1982 |
| e. Full Compliance | July 1, 1983 |
2. The discharger shall report monthly to this Board on status of compliance with the tasks specified in Provision 1 of this Order.
 3. Order Nos. 78-1, 78-5, and 79-36 are hereby rescinded.
 4. The discharger shall submit a contingency plan acceptable to the Board's Executive Officer within 120 days after adoption on this Order. This contingency plan should be reviewed and updated annually.
 5. The discharger shall comply with a Self-Monitoring Program as ordered by the Executive Officer.
 6. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.
 7. This Order expires July 14, 1986. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
 8. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 15, 1981.

Attachment:
 Standard Provisions, Reporting
 Requirement & Definitions (April 1977)

FRED H. DIERKER
 Executive Officer